

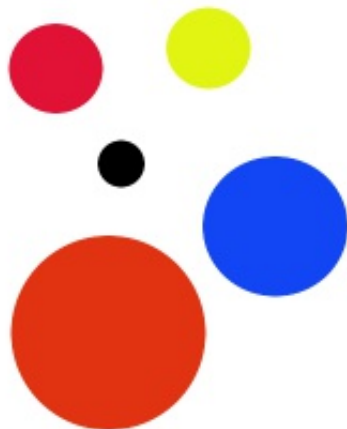
Find shapes with hough circles

This tutorial shows how to find shape with a given color within an image.

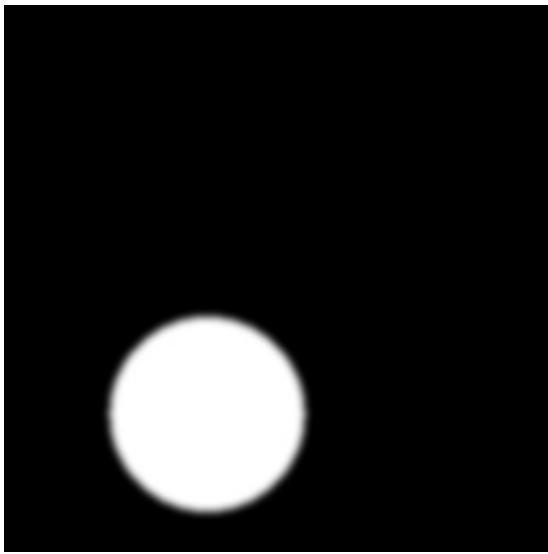
```
(ns combative-atoll
  (:require
    [opencv3.core :refer :all]
    [opencv3.utils :as u]))
```

```
nil
```

```
(def bgr-image
  (-> "resources/detect/circles.jpg" imread (u/resize-
    by 0.5) ))
(u/mat-view bgr-image)
```



```
(def ogr-image
  (-> bgr-image
    (clone)
    (median-blur! 3)
    (cvt-color! COLOR_BGR2HSV)
    (in-range! (new-scalar 0 100 100) (new-scalar 10 255
255))
    (gaussian-blur! (new-size 9 9) 2 2)))
(u/mat-view ogr-image)
```



Let's find the circles using the **hough-circles** function from opencv core.

```
(def circles (new-mat))  
(hough-circles ogr-image circles CV_HOUGH_GRADIENT 1 (/   
  (.rows bgr-image) 8) 100 20 0 0)  
(dotimes [i (.cols circles)]  
  (let [circle (.get circles 0 i) x (nth circle 0) y  
        (nth circle 1) r (nth circle 2) p (new-point x y)]  
    (opencv3.core/circle bgr-image p (int r) (new-scalar  
      0 255 0) 5)))  
(u/mat-view bgr-image)
```

